

Three quarters of the group surveyed (39 teachers, or 75% of the sample) volunteered that they believed virtual teaching did have a positive impact on their in-person instruction, results identical to those found by Lowes (2005). Six teachers said they could draw no conclusions because they no longer teach face to face, three others indicated they lacked sufficient experience with virtual teaching to draw a conclusion, and the remaining four did not respond, which may be interpreted as a negative response. As expected, focus group members mentioned the same kinds of impact, though more teachers gave additional details on types of impact.

An interpretive analysis of survey and focus group responses from the teachers who perceived online teaching had an impact on traditional classroom teaching led to the discovery of three categories of impact: increased use/integration of technologies into traditional teaching (mentioned by 50% of teachers in survey); more effective, student-focused teaching methods and techniques (mentioned by 50% of teachers in survey); and increased empathy and communication with students (mentioned by 10% of teachers in survey). (Categories do not add up to 100% because some teachers expressed more than one perceived impact.) Typical comments from surveys and focus groups are given under each of the categories described here.

### ***Impact Type #1: Increased Technology Use and Integration into Instruction***

The first mentioned impact in all focus groups was always increased uses of technology and technology-integrated lessons in the in-person classrooms, in large part because teachers became more aware of electronic resources and how to use them and gained an increased comfort level with them. One teacher indicated, "Practically speaking, I have had to become more technologically savvy, which has been a definite benefit because I learned to use the Elmo, DLP projector, etc., in my regular classroom. I enjoy using some of the online course resources and assessments in my regular classroom. My regular classroom students enjoy hearing that I teach online, and fairly often I will project some of the content from Desire to Learn (D2L, the course management system) onto my regular classroom screen."

A foreign language teacher noted, "I am more actively considering opportunities to incorporate student-centered technology into my traditional course. Electronic submission of assignments and using Wimba (a digital voice application) for speaking opportunities in the foreign language classroom increases the efficiency of my traditional classroom activities. I knew these options were available, but I had not pushed myself to incorporate them. Now I realize how valuable they are and I am more excited about using them."

Several said that they now use the online course management system resources (in this case, D2L, which had been put into place for distant students) with both distant and on-site students. One said, "My kids take all their quizzes and tests online now." Others reported realizing the motivating influences of certain technologies. "My in-class kids fell in love with Elluminate [an online collaboration tool]," said one teacher. "After-school [Elluminate] tutoring for the 'D2L kids' became very popular with my on-site kids. They'd show up whenever they knew one was scheduled."

Some offered a more nuanced view of motivation for increased technology use. One teacher said, "I began to use technologies in my face-to-face classes that became available because of the [virtual] program; I found I had the courage to do that because of the [virtual] program."

### ***Impact Type #2: More Effective Teaching Strategies***

Many teacher comments focused on the impact that virtual teaching had on the teaching strategies they used in their in-person classrooms. Types of impact on teaching methods and procedures ranged from gaining ideas for lessons to more ways to get students engaged with content. Some

comments were general: "Teaching with [the virtual program] has made me better and stronger in the classroom." Others focused specifically on improved teaching strategies: "Some things [in my in-person class] I think are better now. [For example,] when I finally had laptops for all my virtual students, I also got them for my face-to-face students. I had the students do French e-mails to each other and create PowerPoint [reports] together using Internet resources. The two sites [FTF and online] would often chat together." Student engagement and motivation was another theme. One teacher commented, "As a teacher I am learning so much in terms of using various technologies ... I have so many more ideas on how to engage and encourage both my face-to-face and online students ... the impact has been so positive."

Changes in teaching strategies were evident in comments such as, "I tend to do a lot more reviewing now. When I taught my [online] pre-calculus class, I needed to know what they had covered and what they knew, so I was always asking, 'Do you know this, do you know that?' And they would say they didn't, so I'd review it. [When I did this in my on-site class,] my kids seemed to do better than in the previous year, and it was probably because of that."

### ***Impact Type #3: Better Communications and Empathy with Students***

Though not mentioned as frequently as the other two categories, comments related to improved communications and relationships with students constituted a third, and perhaps most interesting, theme. More attention to articulation of student communications and to providing clear directions was one aspect of this theme. Example comments were: "I started paying more attention with how I worded things. In my FTF class, I became comfortable because I knew all of the kids, but online, it requires more detailed explanation," and "I am much more specific in my assignments now and I have a better understanding of how much body language plays a part in my teaching." Another said, "Teaching at a distance, I found often the simplest appearing instructions reflect a daunting task to a student sometimes. Clarification is the key, and I clarify often." Still another said, "I think I am better able to explain concepts to my 'live' students because I had to be able to explain through words alone with my Web-based students."

One teacher noted that communications between her and her students improved because of her increased use of technologies for communications, observing, "When kids can send you an e-mail and don't have to say it in the room and perhaps be embarrassed, it is easier for them to say what they want to say. It has improved the way they communicate with me."

Finally, a few teachers noted a new empathy with students. One said, "I have been able to see learning more from the student's viewpoint." Another observed, "It has increased my diversity, flexibility, and compassion for students." One teacher offered, "I have learned to develop relationships with [virtual] students on their terms, and I try to take that understanding with me in the traditional classroom." One said she had become more flexible and understanding about assignment deadlines and requirements: "I am more sensitive to my students' needs concerning [how long it takes them when] understanding concepts and assignments." This more flexible, understanding attitude toward students is provocative in that it represents an additional, extra-instructional type of impact not mentioned in previous studies.

## ***Conclusions and Implications***

The results of the current study offer further tentative evidence of the long-rumored and little-researched influence of online experiences on teachers' perspectives and practice. Though based on only one state's virtual school experiences, reports from this study illustrate that using technology in meaningful ways in the context of virtual courses provided the teacher